

## ABSTRACT

Disclosed is a method for forming a bottle shaped trench. The method of the present  
5 invention comprises steps of providing a substrate; forming a plurality of operation layers on  
the substrate; forming a photoresist layer on the operation layers to define a predetermined  
position; forming a trench according to the predetermined position; implanting predetermined  
ions, which reduces oxidizing rate of the sidewall of the trench, into the upper sidewall of the  
trench; oxidizing the sidewall of the trench to form an oxide layer, in which the portion of the  
10 oxide layer formed at the portion of the sidewall implanted with the ions is thin, while the  
portion of the oxide layer formed at the portion of the sidewall not implanted with the ions is  
thick; and removing the oxide layer to form a bottle shaped trench